LISTING OF THE CLAIMS

1-30 (Canceled)

31. (Currently Amended) A method for the ex vivo activation of NK- cells, comprising: contacting NK cells in physiological suspension with an isolated and uncomplexed protein, protein fragment, or polypeptide selected from the group consisting of a Hsp70 protein of SEQ ID NO.: 1 ~~or~~ , a ~~an isolated~~ C-terminal fragment of Hsp70, wherein said fragment ~~is selected from the group consisting of~~ comprises amino acids 384-641 of SEQ ID NO.: 1; ~~derivatives thereof;~~ and a ~~an isolated~~ polypeptide having 70% or greater homology to amino acids 384-641 of SEQ ID NO.: 1 ~~and derivatives thereof;~~ wherein said isolated protein, fragment, polypeptide ~~and derivatives thereof~~ induce an immune response by NK cells, and further said response increases cytolytic activity of the NK cells or stimulates proliferation of the NK cells.

32. (Previously presented) The method of claim 31, wherein said activation of said cells further comprises stimulation of proliferation and/or an increase in cytotoxicity.

33. (Previously presented) The method of claim 31, wherein said physiological suspension containing NK cells comprises a peripheral mononuclear blood cell fraction or fractions thereof.

34. (Previously presented) The method of claim 31, wherein said suspension further comprises cells expressing cell-surface Hsp70.

35. (Previously presented) The method of claim 34, wherein said expressing cells comprise diseased cells from a patient.

36. (Previously presented) The method of claim 35, wherein said diseased cells are selected from the group consisting of leukemia cells, lymphoma cells, tumor cells, metastasizing cells of solid tumors and cells from a virally, mycotically and/or bacterially infected patient.

37. (Previously presented) The method of any one claims 36, wherein said contacting is carried out for at least 3 hours.

38. (Previously presented) The method of claim 37, wherein said contacting is carried out for 4 days.

39. (Previously presented) The method of claim 37, wherein said conditions further comprise addition of cytokine.

40. (Previously presented) The method of claim 39, wherein the cytokine is an interleukin.

41. (Previously presented) The method of claim 40, wherein said interleukin is selected from the group consisting of IL-2, IL-12 and IL-15.

42. (Currently amended) A method for the in vivo activation of the immune system in a patient in need thereof comprising:

i) administering to said patient and pharmaceutically effective amount of NK cells obtained by the method of claim ~~37~~ 31 and

ii) optionally administering to said patient, concurrently or subsequently, a pharmaceutically effective amount of ~~a~~ an isolated and uncomplexed protein, protein fragment, or polypeptide selected from the group consisting of a Hsp70 protein of SEQ ID NO: 1, ~~or~~ a C-terminal fragment of Hsp 70~~, wherein said fragment is selected from the group consisting of~~ comprising amino acids 384-641 of SEQ ID No.: 1~~, derivatives thereof,~~ and a polypeptide having 70% or greater homology to amino acids 384-641 of SEQ ID NO.: 1 ~~and derivatives thereof~~.

43. (Previously presented) The method of claim 42, where said patient is suffering from a

disease selected from the group consisting of cancerous, infectious and autoimmune disease.

44. Canceled.

45. (Previously presented) The method of claim 41, wherein said administration further comprises addition of a cytokine.

46. (Previously presented) The method of claim 45, wherein said cytokine is an interleukin.

47. (Previously presented) The method of claim 46, wherein said interleukin is selected from the group consisting of IL-2, IL-12 and IL-15.

48. (Previously presented) The method of claim 43, wherein said cancerous diseases are selected from the group consisting of tumors, solid tumors, metastatic tumors, leukemias and lymphomas.

49. Withdrawn.

50. (Currently amended) A pharmaceutical composition comprising ~~a~~ an isolated and uncomplexed protein, protein fragment, or polypeptide selected from the group consisting of a Hsp70 protein of SEQ ID NO.:1, ~~or~~ a C-terminal fragment of Hsp70~~, wherein said fragment is selected from the group consisting of~~ comprising amino acids 387-641 of SEQ ID NO.: 1; ~~derivatives thereof,~~ and a polypeptide having 70% or greater homology to amino acids 384-641 of SEQ ID NO.:1 ~~and derivatives thereof~~, and a pharmaceutically acceptable carrier, excipient or diluent.

51. (Currently amended) The composition of claim 50, wherein said protein~~, polypeptide~~ or fragment is present at a concentration of about 10 μg/ml to about 1000μg/ml.

52. (Currently amended) The composition of claim 50, wherein said protein~~, polypeptide~~ or fragment is of human origin.

53. (Currently amended) The composition of claim 50, wherein said protein~~, polypeptide~~ or fragment is recombinant.

54. (Previously presented) A pharmaceutical composition comprising NK cells activated by the method of claim 31.

55. (Currently amended) A method for in vivo activation of the immune system in a patient in need thereof comprising administering to said patient a pharmaceutically effective amount of ~~a~~ an isolated and uncomplexed protein, protein fragment, or polypeptide selected from the group consisting of a Hsp70 protein of SEQ ID NO.:1, ~~or~~ a C-terminal fragment of Hsp70~~, wherein said fragment is selected from the group consisting of~~ comprising amino acids 384-461 of SEQ ID NO.:1~~, derivatives thereof,~~ and a polypeptide having 70% or greater homology to amino acids 384-641 of SEQ ID NO.:1 ~~and derivatives thereof~~.

56. (Previously presented) The method of claim 55, where said patient is suffering from a disease selected from the group consisting of cancerous, infectious and autoimmune disease.

57. Canceled.

58. (Previously presented) The method of claim 55, wherein said administration further comprises addition of cytokine.

59. (Previously presented) The method of claim 58, wherein said cytokine is an interleukin.

60. (Previously presented) The method of claim 59, wherein said interleukin is selected from the group consisting of IL-2, IL-12 andIL-15.